

Morphological features of constitutional muscular of the bird's esophagus

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At histological study we found that the muscular membrane of esophagus various birds specialization (carnivorous, granivorous, insectivores), formed only smooth muscle tissue. Leyomiotsity in the muscular membrane in birds esophagus are arranged as separate beams and form two layer. The external circular layer is continuous and most powerful, longitudinal is thickness. We noted that the thickness of the tunica muscularis layers and bordering near the pharynx and the stomach than those in the middle of the esophagus. Moreover, this pattern is characterizing not only by the muscular layer of the esophagus as whole, but also its individual layers. Attention is drawn to the fact that the degree of development of the muscle membrane in predatory and granivorous forms is higher than insectivorous have.

The muscular layer of the bird's esophagus wall is formed only with smooth muscle tissue. Their esophagus acquired additional reserved function which can be regarded as one of the adaptive changes, associated with flying. Intestines of birds strongly shortened, so the temporary deposit and preliminary food processing have already started in the esophagus. Possibly, this can be explain by the peculiar morphology of the smooth muscle tissue, which we found at the ultrastructural analysis. Peculiar phenotype of leyomiotsites and features of their tissue organization show that the muscular layer of esophageal birds provides the slow reduction of the tube, smooth movement of food bolus and dosed food intake into the stomach. New, reserves, organ function in representatives of this taxon especially pronounced manifested in predatory and granivorous birds, which esophagus forms the special extension - goiter.